

What is claimed is:

1. An oligonucleotide comprising from 8 to 30 nucleotides connected by covalent linkages, wherein said oligonucleotide has a sequence specifically hybridizable with
5 a nucleic acid encoding a JNK protein and said oligonucleotide modulates the expression of said JNK protein.
2. The oligonucleotide of claim 1, wherein at least one of said covalent linkages of said oligonucleotide is a modified covalent linkage.
- 10 3. The oligonucleotide of claim 1, wherein at least one of said nucleotides has a modified nucleobase.
4. The oligonucleotide of claim 1, wherein at least one of said nucleotides has a modified sugar moiety.
5. The oligonucleotide of claim 1, wherein at least
15 one of said covalent linkages of said oligonucleotide is a modified covalent linkage and at least one of said nucleotides has a modified sugar moiety.
6. The oligonucleotide of claim 1 having at least two non-contiguous nucleotides having modified sugar moieties.
- 20 7. The oligonucleotide of claim 1 having at least two non-contiguous nucleotides having modified sugar moieties, wherein at least one of said covalent linkages of said oligonucleotide is a modified covalent linkage and at least one of said nucleotides has a modified sugar moiety.
- 25 8. The oligonucleotide of claim 1 further comprising at least one lipophilic moiety which enhances the cellular uptake of said oligonucleotide.

9. An oligonucleotide comprising from 8 to 30 nucleotides connected by covalent linkages, wherein said oligonucleotide has a sequence specifically hybridizable with a nucleic acid encoding a first isoform of a JNK protein, and
5 said sequence of said oligonucleotide is not specifically hybridizable with a nucleic acid encoding a second isoform of said JNK protein, and wherein said oligonucleotide modulates the expression of said first isoform of said JNK protein but not that of said second isoform of said JNK protein.

10 10. A pharmaceutical composition comprising the oligonucleotide of claim 1, or a bioequivalent thereof, and a pharmaceutically acceptable carrier.

11. The pharmaceutical composition of claim 10, further comprising one or more compounds from the list
15 consisting of a stabilizing agent, a penetration enhancer, a carrier compound and a chemotherapeutic agent.

12. A pharmaceutical composition comprising a plurality of the oligonucleotides of claim 1, or bioequivalents thereof, and a pharmaceutically acceptable
20 carrier.

13. A method of treating an animal having, suspected of having or prone to having a hyperproliferative disease comprising administering to said animal a prophylactically or therapeutically effective amount of the pharmaceutical
25 composition of claim 10.

14. A method of modulating the expression of a JNK protein in cells or tissues comprising contacting said cells or tissues with the oligonucleotide of claim 1.

15. A method of modulating cell cycle progression in cultured cells or the cells of an animal comprising administering to said cells an effective amount of the oligonucleotide of claim 1.

5 16. A method of modulating, in cultured cells or the cells of an animal, the phosphorylation of a protein phosphorylated by a JNK protein, wherein said method comprises administering to said cells an effective amount of the oligonucleotide of claim 1.

10 17. A method of modulating, in cultured cells or the cells of an animal, the expression of a cellular protein that promotes one or more metastatic events, wherein said method comprises administering to said cells an effective amount of the oligonucleotide of claim 1.

15 18. The oligonucleotide of claim 1 wherein said JNK protein is that of a mammal.

19. The oligonucleotide of claim 3 wherein said modified nucleobase is 5-methylcytosine.

20 20. An oligonucleotide comprising from 8 to 30 nucleotides connected by covalent linkages, wherein said oligonucleotide has a sequence specifically hybridizable with two or more nucleic acids encoding different isoforms of a JNK protein and wherein said oligonucleotide modulates the expression of said two or more isoforms of said JNK protein.

25 21. A method of inhibiting the growth of a tumor in an animal comprising administering to said animal an effective amount of the pharmaceutical composition of claim 10.

22. A method of inhibiting the growth of a tumor in an animal comprising administering to said animal an effective amount of the pharmaceutical composition of claim 11.

23. A method of inducing apoptosis in a cell comprising contacting a cell with an antisense oligonucleotide comprising from 8 to 30 nucleotides connected by covalent linkages, wherein said oligonucleotide has a sequence specifically hybridizable with a nucleic acid encoding a JNK2 protein and decreases the expression of said JNK2 protein, so that apoptosis is induced.

24. A method of treating a human having a disease or condition characterized by a reduction in apoptosis comprising administering to a human a prophylactically or therapeutically effective amount of an antisense oligonucleotide comprising from 8 to 30 nucleotides connected by covalent linkages, wherein said oligonucleotide has a sequence specifically hybridizable with a nucleic acid encoding a human JNK2 protein and decreases the expression of said human JNK2 protein.

25. The method of claim 23 wherein the antisense oligonucleotide has a sequence comprising SEQ ID NO: 31.

26. The method of claim 24 wherein said disease or condition is prostate cancer.

27. The method of claim 21 wherein said tumor is a prostate tumor.

28. A method of treating an animal having a disease or condition associated with a JNK protein comprising administering to said animal a therapeutically

or prophylactically effective amount of the compound of claim 1 so that expression of the JNK protein is inhibited.

29. The method of claim 28 wherein said disease or condition is inflammation.

5 30. The method of claim 28 wherein said disease or condition is fibrosis or a fibrotic disease or condition.

31. The method of claim 30 wherein said fibrotic disease or condition is fibrotic scarring, peritoneal
10 adhesions, lung fibrosis or conjunctival scarring.

32. The method of claim 28 wherein the disease or condition is a hyperproliferative disease or condition.

33. The method of claim 32 wherein the
15 hyperproliferative disease or condition is cancer.